

To: Rao, Kate[Rao.kate@epa.gov]
Cc: R9-Deep[R9Deep@epa.gov]; Robin, George[Robin.George@epa.gov]
From: Robin, George
Sent: Wed 2/18/2015 10:08:49 PM
Subject: RE: Calif. bill aims to protect California Groundwater from Injection Well Impacts

Thanks Kate. If anyone wants to discuss this, let me know.

George.

● Here's the story from the author's press release:

<http://asmcdc.org/members/a37/news-room/press-releases/williams-introduces-bill-to-protect-underground-water>

Press Releases

Williams Introduces Bill to Protect Underground Water

Created: Tuesday, 17 February 2015 13:29

SACRAMENTO — Assemblymember Das Williams (D-Carpinteria) today introduced Assembly Bill 356, which would require groundwater monitoring near Class II injection wells in order to protect underground sources of drinking water from oil and gas wastewater disposal and enhanced oil recovery (EOR) treatments. The bill would provide the State Water Resources Control Board the authority to review groundwater monitoring plans as part of oil companies' permit application or notice of intent for injection wells.

"We cannot continue to jeopardize the quality of one of our most precious natural resources. My priority with this bill is the safety of Californians. We cannot gamble the quality of safe drinking water, especially when the state is experiencing the worst drought in nearly four decades," said Assemblymember Williams.

The Division of Oil, Gas and Geothermal Resources (DOGGR) disclosed on February 6, 2015 that 2,500 wells--more than 2,000 of which are active--currently are permitted to inject gas and oil waste or other fluids into protected sources of drinking water, in violation of the Federal Safe Drinking Water Act. Among those wells, 490 are used for disposal of oil and gas waste water, and 1,987 are for the injection of fluids or steam for enhanced oil recovery (EOR).

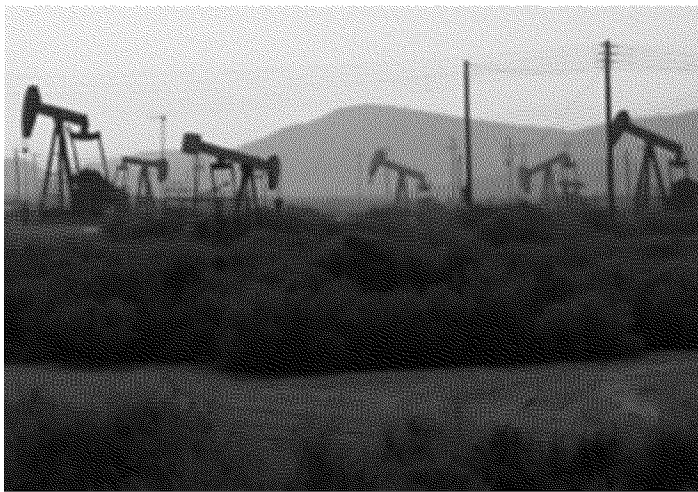
"Oil and gas industry wastewater disposal and enhanced recovery processes are in desperate need of more oversight from the State's water quality experts," says Andrew Grinberg of Clean Water Action. "In this time of extreme drought, the stakes are higher than ever to prevent contamination at the hands of the oil industry. AB356 will ensure that injection projects are properly permitted going forward and prevent the injection of toxic chemicals into our drinking water sources."

Senate Bill 4 (Pavley, 2013) already requires groundwater monitoring for wells that receive stimulation treatments, such as fracking or acidizing. AB 356 would mirror and build on the SB 4 program to protect the aquifers that may be impacted by injection wells.

•□□□□□□□ Here's the text for the KEYT story:

Bill aims to add more protections for California groundwater from oil and gas drilling contamination

A new bill up for consideration in Sacramento is aimed at protecting groundwater from oil and gas drilling operations.



Roughly 60 percent of the oil pumped to the surface in California comes from Class II injection wells, according to the state. This oil field is in Kern County, Calif.

Credit Flickr member ben klocek

Central Coast Assembly Member Das Williams (D-Carpinteria) introduced AB-356 on Tuesday. It would require monitoring near Class II injection wells.

Currently, there are nearly 42,000 oil field injection wells operating in the state, according to the California Department of Conservation. These wells are designed to increase oil recovery and "safely dispose of the salt and fresh water produced with oil and natural gas" the department states.

Well over half of the oil produced in California is pumped from the ground through injection wells.

SB 4, which was signed into law by Governor Brown last September, set new rules for monitoring fracking or acidizing wells. Williams says his version builds on that program and would further protect local water supplies that he believes are currently at risk.

"Some of these wells in Santa Barbara County may be connected to potable water supplies, there are two that are particularly high likelihood," said Williams. "The most outrageous thing is that while the review is going on, they can continue to inject into these wells."

Current state and federal regulations allow some fluids produced during the production process to be injected into a Class II well. These fluids include:

- Diatomaceous earth-filter backwash
- Thermally enhanced oil recovery cogeneration plant fluid
- Water-softener regeneration brine
- Air scrubber waste
- Drilling mud filtrate
- Naturally occurring radioactive materials (NORM)
- Slurrified crude-oil
- Saturated soils
- Tank bottoms

Earlier this month, the State of California revealed that 2500 wells around the state were found in violation of the Federal Safe Drinking Water Act.

From: Rao, Kate

Sent: Wednesday, February 18, 2015 1:27 PM

To: Dermer, Michele; Robin, George; Coffman, Joel; Rumrill, Nancy

Cc: Albright, David

Subject: FW: Calif. bill aims to protect California Groundwater from Injection Well Impacts

FYI

Kate Rao
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USEPA Region 9
75 Hawthorne St., San Francisco, CA 94105
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From: Skadowski, Suzanne

Sent: Wednesday, February 18, 2015 12:58 PM

To: Rao, Kate; Montgomery, Michael; Albright, David

Cc: Mogharabi, Nahal; Maier, Brent

Subject: Calif. bill aims to protect California Groundwater from Injection Well Impacts

KCBX Central Coast Public Radio: Bill aims to add more protections for California groundwater from oil and gas drilling contamination

Central Coast Assembly Member Das Williams (D-Carpinteria) introduced AB-356 on Tuesday. It would require monitoring near Class II injection wells. Currently, there are nearly 42,000 oil field injection wells operating in the state, according to the California Department of Conservation. These wells are designed to increase oil recovery and "safely dispose of the salt and fresh water produced with oil and natural gas" the department states. Well over half of the oil produced in California is pumped from the ground through injection wells. SB 4, which was signed into law by Governor Brown last September, set new rules for monitoring fracking or acidizing wells. Williams says his version builds on that program and would further protect local water supplies that he believes are currently at risk. **"Some of these wells in Santa Barbara County may be connected to potable water supplies, there are two that are particularly high likelihood,"** said Williams. "The most outrageous thing is that while the review is going on, they can continue to inject into these wells."

KEYT: New Bill Seeks to Protect California's Underground Water

Assemblyman Das Williams introduced AB 356 on Tuesday. The bill seeks to protect underground sources of drinking water from oil and gas wastewater disposal and enhanced oil recovery treatments. AB 356 would also require groundwater monitoring near injection wells labeled as Class II. An injection well is a device most commonly used to dispose chemicals, wastewater and brine deep underground into certain rock formations like sandstone or limestone, or the shallow soil layer. An injection well can also be used to enhance oil production. "We cannot continue to jeopardize the quality of one of our most precious natural resources," said Assemblyman Williams. "My priority with this bill is the safety of Californians. We cannot gamble the quality of safe drinking water, especially when the state is experiencing the worst drought in nearly four decades."

Suzanne Skadowski

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From: Rao, Kate

Sent: Wednesday, February 18, 2015 8:25 AM

To: Skadowski, Suzanne; Mogharabi, Nahal

Subject: FW: More Flak Over California Injection Wells, Groundwater Impacts

FYI

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From: Robin, George
Sent: Wednesday, February 18, 2015 8:22 AM
To: R9-Deep
Cc: Robin, George; Rao, Kate
Subject: More Flak Over California Injection Wells, Groundwater Impacts

<http://www.naturalgasintel.com/articles/101385-more-flak-over-california-injection-wells-groundwater-impacts>

[Shale Daily](#) / [Monterey](#) / [Rockies/Other](#)

More Flak Over California Injection Wells, Groundwater Impacts

[Richard Nemec](#)

February 17, 2015

The California oil/gas industry and its regulators have gone on the offensive over allegations that drinking water has been contaminated due to lax oversight of underground injection and that hydraulic fracturing (fracking) may have been involved.

The state's Division of Oil, Gas and Geothermal Resources (DOGGR) and

the Department of Water Resources (DWR) are investigating 140 injection wells that could have injected toxic fluids into aquifers not cleared by the U.S. Environmental Protection Agency (EPA) to receive the injections (see *Shale Daily*, [Feb.9](#)). And a report in the *Los Angeles Times* last Wednesday raised allegations of industry tests of fracking fluid from the past year showing carcinogenic benzene levels 700 times higher than federal standards.

Regional EPA officials were quoted in the *Times* as being "shocked" over the reported benzene levels, along with recent revelations about allegedly lax DOGGR oversight of the underground injection control (UIC) program.

Regarding the benzene, state Oil/Gas Supervisor Steven Bohlen told *NG's Shale Daily* last Friday that full reporting of fracking fluid ingredients will not become mandatory under California's new well stimulation rules (SB 4) until July 1, but "oil/gas operators have indicated to DOGGR that they are not using benzene as an ingredient in their fluid."

Bohlen pointed out that benzene is a naturally occurring hydrocarbon, so its presence in fracking waste fluid is expected. "DOGGR acknowledged that its record keeping and data collection systems must be upgraded, and that it has made errors in the permitting of injection wells," he said. "But we are working, along with other state and federal regulators, to ensure that oil/gas production takes place in a manner that upholds the provisions of the federal Safe Drinking Water Act and protects Californians and the environment."

A spokesperson for the Western States Petroleum Association (WSPA) said he was quite sure that flowback fluids are not reinjected into groundwater, and that water being extracted from a hydrocarbon zone "should not surprise anyone." In California, for every barrel of oil produced, 10 barrels of water come up.

"Crude oil typically contains high levels of benzene, so water commingled with that oil would also contain benzene," said the WSPA spokesperson. The key issue is that water is handled in a manner that ensures it does not mingle with or impact drinking water. To date, WSPA's understanding is that there has been no impact on drinking water, he said.

With the reports from industry required under SB 4, more data on the levels of harmful chemicals in fracking fluids is becoming available, but the state

has not upgraded its processes for reporting and tracking the reinjected fluids, according to EPA officials. In December, EPA ordered DOGGR to come up with a plan for safeguarding drinking water by this month and gave them a two-year period for implementation. Bohlen unveiled the state's plan Feb. 9.

EPA has provided California with a \$500,000 grant to help the state establish a baseline for water quality, and it has reminded state officials that the 1983 federal authorization for the state to regulate water usage in oil/gas operations could be revoked if California does not upgrade its programs.

State officials told *NGI's Shale Daily* there is confusion in the general public, including news media, between groundwater and drinking water, and the role and content of fracking fluids in relationship to both types of water. "Not all groundwater is created equal, and most groundwater is not drinkable without treatment," Bohlen said. "In some parts of the state, groundwater is mixed not only with naturally occurring hydrocarbons, but also with other naturally occurring elements, such as arsenic or boron."

Bohlen said that water injected after typical oil/gas operations is "similar to the native groundwater." Fracking was not involved in the 140 UIC program wells being investigated by DOGGR and DWR, he said. "Thus far, no harm to water suitable for drinking or agricultural use has been found," Bohlen said.